

CLAIMS

What is claimed is:

1. An improved transparent armor structure for use in protecting an opening in a vehicle the armor including: a multi pieced C-shaped frame mounted to a vehicle and extending into the interior of the vehicle, the frame surrounding the opening; a sheet of laminated transparent armor composite comprising a plurality of lamella at least one of said lamella being formed from a polymeric material, an innermost and outermost lamella each being formed of tempered silica glass, all of the lamella of said sheet of laminated transparent armor being bonded to form a coherent laminated bullet resisting structure, said laminated transparent armor composite being surrounded by said frame to hold said laminated transparent armor in position over said opening; a y-shaped bracket attached to the C-shaped bracket in the interior of the vehicle by means of a plurality of fasteners, the y- shaped member adapted to hold a transparent spall resisting layer parallel to and slightly spaced from the inner surface of the laminated transparent armor, to form a chamber between the first and second panels; and a desiccant located within the chamber the desiccant serving to minimize the amount of condensation in the space between the laminated transparent armor and the surface of the transparent armor and the transparent spall resisting layer.

2. The transparent armor structure of Claim 1 where said C-shaped bracket comprises a first vertically extending leg attached to the vehicle about the opening, a horizontal member extending orthogonally into the vehicle from the first vertically extending leg and a second vertical leg attached to the horizontal member at the end distal the first vertical leg.

3. The transparent armor structure of Claim 1 where the transparent spall resisting layer has a tint for limiting light transmission.
4. The transparent armor of claim one where the transparent spall layer is polycarbonate.
5. The transparent armor structure of Claim 1 where the c-shaped multi-pieced frame has a C-shaped polymeric material located between the C-shaped frame and the transparent armor.
6. The transparent armor of Claim 1 where the transparent spall layer is tempered glass.